

Town of Fremont

2006 Public Health Mosquito Control Program

The Town of Fremont is starting a comprehensive public health related mosquito control program in 2006. The program is in response to the presence of mosquito-borne diseases in 2005- Eastern Equine Encephalitis (EEE) and West Nile Virus (WNV). The program will include identification of mosquito breeding habitats and associated species, control of mosquito larvae with a naturally occurring bacterium and collection of winged mosquitos for EEE and WNV testing.

The identification of mosquito breeding habitats in Fremont has already started. Typical habitats include red maple swamps, woodland pools, roadside ditches and cattail marshes. Each mosquito breeding site is being documented on a form describing the habitat type, determination of a GPS location, listing of mosquito species found, description of ecological characteristics and listing of property owners. Maps will be produced showing the exact locations of each mosquito breeding site.

Mosquito breeding habitats will be controlled by a naturally occurring bacterium called Bti. Bti has a granular and liquid form. When applied to specific areas of mosquito breeding sites, Bti effectively eliminates the target species. The bacterium is ingested by mosquito larvae in the water. Once ingested, the bacterium moves to the gut or stomach. The bacterium is activated only when present in the gut of a mosquito larva. Other insects are unaffected by Bti. Bti will not reproduce in the environment and must be re-applied as necessary. Those wishing their properties not be treated must contact the Board of Selectmen in writing.

Collection of winged mosquitos will begin around Memorial Day when mosquitos start to become very active. Collecting will be completed weekly until the end of September. There are three traps used to collect mosquitos. Light traps use a small light bulb and dry ice (CO₂) to attract mosquitos into a net via a small fan. Resting Box traps are 1 meter squared wooden traps with the bottom open. The bottom is placed on the ground and slightly elevated by a rock or piece of wood. Mosquitos will enter the trap at the bottom seeking a shaded place to rest during the day. Gravid traps are used to collect female mosquitos that have had a blood meal and are likely to have EEE or WNV. Gravid traps consist of a bucket with putrid water which attracts females looking to lay eggs. A fan forces the mosquitoes into a collection net. All collected mosquitos will be microscopically identified to species. Mosquitos associated with EEE or WNV will be preserved in a subzero freezer and later transported to the State Medical Laboratory in Concord for testing. The results of testing will be provided to the Board of Selectmen and to the town's mosquito control contractor (Municipal Pest Management Services, Inc.) as soon as possible.

Questions or inquiries regarding mosquitos and mosquito control can be directed by e-mail to Michael Morrison at swampfixer@verizon.net or by fax to 603-431-8588.

Michael Morrison, Entomologist
Municipal Pest Management Services, Inc.